



MERCURY (ELEMENTAL, ORGANIC AND INORGANIC)

Agent Overview:

Mercury has no known biological function and is highly toxic. Ingestion is the most typical route of mercury toxicity, but can result from inhalation and dermal exposures, particularly dimethylmercury. Symptoms of toxicity are typically delayed for > 1 month after mercury exposure and may include CNS effects: blindness, dyspnea, respiratory distress, tremors, neurotoxicity, paresthesias, emotional lability, headaches, polyneuropathy, muscle weakness, irritability, memory loss, depression, severe GI corrosion, hypertension, kidney or renal failure (nephrotic syndrome), tachycardia, "mercurial erythremia" (excitability, memory loss, insomnia, timidity, delirium). In advanced cases, loss of coordination (ataxia), difficulty with speech (dysarthria), loss of peripheral vision, hearing impairment, limb sensory deficits, and death may occur. Mercury exposure in children may cause Pink disease (acrodermatitis) with symptoms of flushing, itching, swelling, tachycardia, weakness, hypertension, excessive salivation/perspiration, irritability, and rashes.

Lab Specimen Submittal:

Authorization by Dr. Jane Getchell, Director DPHL; Christina Pleasanton, Deputy Director DPHL; or Tara Lydick, Chemical Terrorism Coordinator.

Type of Specimens

Urine: 25mL-50mL screw-cap container

Necessary for Testing:

Whole blood:

- Three, 5 or 7 mL purple-top (EDTA) tubes (vacuum fill only) AND
- One, 5 or 7 mL gray-top or green-top (vacuum fill only) AND
- Two empty urine cups and two empty blood tubes for each lot # submitted.

Packaging Instructions:

Urine: freeze specimen upon collection and ship on dry ice; label specimens and package individually; wrap with absorbent material.

Whole blood: place filled tubes in a shipping rack for stability, wrap the tubes in absorbent material, and secure with tape. Place the packaged tubes in a secondary unbreakable container. Specimens may be shipped cold but *must not* be frozen.

All: wrap sample containers and layers with tamper-proof, waterproof forensic evidence tape initialed by collector, being careful not to cover the sample labels. Ship to DPHL as Biological Substance, Category B (Packing Instruction 650).

Receiving Specimens at DPHL:

Authorized specimens are received at the rear (loading dock) entrance of the laboratory. Submitters must present ID and have proper forms completed.

Reporting Results:

DPHL is a Qualified Trace and Toxic Metals Laboratory. Testing personnel will notify supervisor or Laboratory Director, Deputy Laboratory Director, or Chemical Terrorism Coordinator. The Potential Exposure Information and Call form will provide information for notification of testing results outside of the DPHL.

Contact Information:

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